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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/621,112	GELMAN ET AL.	
	Examiner	Art Unit	
	Richard G. Keehn	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *7/16/2003 & 02/06/2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 April 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-48 filed on 02/06/2004 have been examined and are pending.

2. Applicant's submission of claims 1-52 filed on 07/16/2003 have not been examined because they differ from the aforementioned claims. Examiner has chosen to examine the most recent submission. Applicant is directed toward 37 CFR 1.121(c) (listed below) regarding the appropriate method for amending claims.

"(c) Claims. Amendments to a claim must be made by rewriting the entire claim with all changes (e.g., additions and deletions) as indicated in this subsection, except when the claim is being canceled. Each amendment document that includes a change to an existing claim, cancellation of an existing claim or addition of a new claim, must include a complete listing of all claims ever presented, including the text of all pending and withdrawn claims, in the application. The claim listing, including the text of the claims, in the amendment document will serve to replace all prior versions of the claims, in the application. In the claim listing, the status of every claim must be indicated after its claim number by using one of the following identifiers in a parenthetical expression: (Original), (Currently amended), (Canceled), (Withdrawn), (Previously presented), (New), and (Not entered)."

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Figures 4, 5 and 6 of the drawing set submitted on 04/02/2004 are missing reference numbers. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claim 42 is objected to because of the following informalities: The term "ultility" is misspelled. Examiner assumes applicant meant "utility" and will continue examination based on said assumption. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 36-41 and 43-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claims 36-41 recite the limitation "method" in "Claim 1." There is insufficient antecedent basis for this limitation in the claim. Examiner assumes that applicant intended to make Claims 36-41 dependant upon Claim 35 and will continue examination based on said assumption. Appropriate correction is required.

9. Claims 43-48 recite the limitation "apparatus" in "Claim 8." There is insufficient antecedent basis for this limitation in the claim. Examiner assumes that applicant intended to make Claims 43-48 dependant upon Claim 42 and will continue examination based on said assumption. Appropriate correction is required.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-48 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,944,555 B2 (Blackett et al.).

As to Claim 1, Blackett et al. anticipate in an electric power network, an advanced communications system employing an atomic communications system architecture, comprising:

a node element deployable on said electric power network and having a global port and an inward port (Fig. 3b and Column 5, line 62 through Column 6, line 23 recite the IED in an electric power network with ports connected to the power source for monitoring and the network to communicate with other devices on the network);

the node element having a global data store that is populated with information supplied via said global port and is accessible via said local port (Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to other nodes, hence each port has access to the other port's memory contents. Column 13, lines 13-19 recite the collection of data from the port connected to the network components or to other IED's);

the node element having a local data store that is populated with information supplied via said local port and is accessible via said global port (Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to other nodes, hence each port has access to the other port's memory contents. Column 11, lines 47-59 recite the memory used to store data from the local power management port and the use of the IED as a communications device with other IED devices);

the node element being configured to selectably support at least one of three planes of interaction using the information maintained within said global and local data stores (Column 12, lines 1-22 recite the power management application components including peer-to-peer communication, power control and monitoring components that can operate together or selectively in any combination):

a power analysis plane of interaction (Column 5, line 62 through Column 6, line 23 recite the IED performing power analysis),

a data plane of interaction (Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports), and

a control plane of interaction (Column 5, line 62 through Column 6, line 23 recite the IED controlling its associated load).

As to Claim 2, Blackett et al. anticipate the communications system architecture of claim 1 wherein said node element is implemented using modular blocks providing sets of features that can be selectively included or excluded (Column 12, lines 1-22 recite the power management application components including peer-to-peer communication, power control and monitoring components that can operate together or selectively in any combination).

As to Claim 3, Blackett et al. anticipate the communications system architecture of claim 1 wherein said node element is adapted to selectively enable and disable selected ones of said planes of interaction (Column 12, lines 1-22 recite the power

management application components including peer-to-peer communication, power control and monitoring components that can operate together or selectively in any combination).

As to Claim 4, Blackett et al. anticipate the communications system architecture of claim 2 wherein said sets of features include features to selectively enable and disable said planes of interaction (Column 12, lines 1-22 recite the power management application components including peer-to-peer communication, power control and monitoring components that can operate together or selectively in any combination).

As to Claim 5, Blackett et al. anticipate the communications system architecture of claim 1 wherein said global data store is configured to store aggregate information that is periodically updated (Column 5, lines 37-41 recite monitoring which is the collection of aggregate data over periodic intervals. Column 16, lines 49-55 recite the periodic update of consumption data at pre-defined time intervals).

As to Claim 6, Blackett et al. anticipate the communications system architecture of claim 1 wherein said local data store is configured to store aggregate information that is periodically updated(Column 5, lines 37-41 recite monitoring which is the collection of aggregate data over periodic intervals. Column 16, lines 49-55 recite the periodic update of consumption data at pre-defined time intervals).

As to Claim 7, Blackett et al. anticipate the communications system architecture of claim 1 wherein said local data store is configured to store local interface information about with a device associated with said node element (Column 5, line 62 through Column 6, line 23 recite the IED holding device information until a polling request is made. Column 11, lines 47-59 recite the memory used to store data from the local power management port and the use of the IED as a communications device with other IED devices).

As to Claim 8, Blackett et al. anticipate the communications system architecture of claim 1 wherein a first node element is configured to acquire local interface information about a device associated with said node element and to propagate that local interface information to another node element on said electric power network (Column 5, line 62 through Column 6, line 23 recite the IED collecting local device information and pushing the data onto the network).

As to Claim 9, Blackett et al. anticipate the communications system architecture of claim 8 wherein said first node element acquires local interface information through said inward port and propagates said local interface information through said global port (Fig. 3b recites the IED's input and output ports as load monitoring and communication ports respectively in this embodiment).

As to Claim 10, Blackett et al. anticipate the communications system architecture of claim 1 wherein said node element implements said power analysis plane of interaction to collect and disseminate power quality of service information (Column 5, line 62 through Column 6, line 23 recite the collection and analysis of power information and the dissemination onto the network).

As to Claim 11, Blackett et al. anticipate the communications system architecture of claim 1 wherein said node element implements said data plane of interaction to couple a device associated with said node element to an external source of information (Column 5, line 62 through Column 6, line 23 recite the coupling of the local device to the network devices via the IED).

As to Claim 12, Blackett et al. anticipate the communications system architecture of claim 11 wherein said external source of information is the internet (Column 6, lines 38-54 recite the use of internet communication).

As to Claim 13, Blackett et al. anticipate the communications system architecture of claim 1 wherein said node element implements said control plane of interaction to control a device associated with said node element (Column 5, line 62 through Column 6, line 23 recite the IED controlling electric power distribution).

As to Claim 14, Blackett et al. anticipate the communications system architecture of claim 1 wherein said node element implements said power analysis plane of interaction and said control plane of interaction to assess power conditions on said electric power network and to control a device associated with said node element to meet a predefined objective (Column 5, line 62 through Column 6, line 23 recite the power analysis and control to meet the power management objectives).

As to Claim 15, Blackett et al. anticipate the communications system architecture of claim 1 wherein said predefined objective is a self-healing objective to selectively control power consumption to thereby balance load on said electric power network (Column 36, line 49 through Column 37, line 2 recite IED's re-routing power based on a self-healing algorithm).

As to Claim 16, Blackett et al. anticipate the communications system architecture of claim 1 wherein said node element implements a proxy mechanism whereby a device associated with said node may be controlled by entities external to said device that are coupled to said electric power network (Column 27, lines 41-52 recite the transport box in one embodiment that works with the IED to communicate information with the network external devices).

As to Claim 17, Blackett et al. anticipate the communications system architecture of claim 1 wherein said node element implements data encryption to control access to information via said global port (Column 4, lines 29-32 and Claims 5, 40 and 59 recite the use of encryption for security purposes).

As to Claim 18, Blackett et al. anticipate an appliance for coupling to an electric power network, comprising:

an appliance processor that supports an appliance control interface having an associated data store of appliance control data (Column 5, line 62 through Column 6, line 23 recites power monitoring and control modules);

a node element having a global port coupled to said electric power network and an inward port configured to access said data store of appliance control data (Column 5, line 62 through Column 6, line 23 recite the IED, a two-port device coupled to an electric power network and having data monitoring and control capabilities);

the node element being configured to propagate said appliance control interface though said global port thereby allowing access to said data store of appliance control data from the electric power network (Fig. 17 and Column 6, lines 38-54 recite the IED acting as a data sharing network node capable of sharing data about its associated device or sub-network of devices).

As to Claim 19, Blackett et al. anticipate the appliance of claim 18 wherein said node element is configured to selectably support at least one of three planes of

interaction using the information maintained within said global and local data stores (Column 12, lines 1-22 recite the power management application components including peer-to-peer communication, power control and monitoring components that can operate together or selectively in any combination):

a power analysis plane of interaction (Column 5, line 62 through Column 6, line 23 recite the IED performing power analysis),

a data plane of interaction (Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports), and

a control plane of interaction (Column 5, line 62 through Column 6, line 23 recite the IED controlling its associated load).

As to Claim 20, Blackett et al. anticipate the appliance of claim 18 wherein said node element is implemented using modular blocks providing sets of features that can be selectively included or excluded (Column 12, lines 1-22 recite the power management application components including peer-to-peer communication, power control and monitoring components that can operate together or selectively in any combination).

As to Claim 21, Blackett et al. anticipate the appliance of claim 19 wherein said node element is adapted to selectively enable and disable selected ones of said planes of interaction (Column 12, lines 1-22 recite the power management application

components including peer-to-peer communication, power control and monitoring components that can operate together or selectively in any combination).

As to Claim 22, Blackett et al. anticipate the appliance of claim 18 wherein said node element further includes a global data store that is populated with information supplied via said global port and is accessible via said local port (Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to other nodes, hence each port has access to the other port's memory contents. Column 13, lines 13-19 recite the collection of data from the port connected to the network components or to other IED's).

As to Claim 23, Blackett et al. anticipate the appliance of claim 22 wherein said global data store is configured to store aggregate information that is periodically updated (Column 5, lines 37-41 recite monitoring which is the collection of aggregate data over periodic intervals. Column 16, lines 49-55 recite the periodic update of consumption data at pre-defined time intervals).

As to Claim 24, Blackett et al. anticipate the appliance of claim 18 wherein said node element further includes a local data store that is populated with information supplied via said local port and is accessible via said global port (Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to other nodes, hence each port

has access to the other port's memory contents. Column 11, lines 47-59 recite the memory used to store data from the local power management port and the use of the IED as a communications device with other IED devices).

As to Claim 25, Blackett et al. anticipate the appliance of claim 24 wherein said local data store is configured to store aggregate information that is periodically updated (Column 5, lines 37-41 recite monitoring which is the collection of aggregate data over periodic intervals. Column 16, lines 49-55 recite the periodic update of consumption data at pre-defined time intervals).

As to Claim 26, Blackett et al. anticipate the appliance of claim 24 wherein said local data store is configured to store local interface information about with a device associated with said node element (Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to other nodes, hence each port has access to the other port's memory contents. Column 11, lines 47-59 recite the memory used to store data from the local power management port and the use of the IED as a communications device with other IED devices)

As to Claim 27, Blackett et al. anticipate the appliance of claim 18 wherein said node element implements a power analysis plane of interaction to collect and

disseminate power quality of service information (Column 5, line 62 through Column 6, line 23 recite power analysis and dissemination by the IED).

As to Claim 28, Blackett et al. anticipate the appliance of claim 18 wherein said node element implements a data plane of interaction to couple said appliance to an external source of information (Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to other nodes, hence each port has access to the other port's memory contents).

As to Claim 29, Blackett et al. anticipate the appliance of claim 28 wherein said external source of information is the internet (Column 6, lines 38-54 recite the internet communication).

As to Claim 30, Blackett et al. anticipate the appliance of claim 18 wherein said node element implements a control plane of interaction whereby said appliance may be controlled by information input through said node element (Column 5, line 62 through Column 6, line 23 recite the IED distributed control features).

As to Claim 31, Blackett et al. anticipate the appliance of claim 18 wherein said node element implements a power analysis plane of interaction and a control plane of

interaction to assess power conditions on said electric power network and to control said appliance to meet a predefined objective (Column 5, line 62 through Column 6, line 23 recite the power analysis and control features of the IED to meet the power management objectives).

As to Claim 32, Blackett et al. anticipate the appliance of claim 18 wherein said predefined objective is a self-healing objective to selectively control power consumption to thereby balance load on said electric power network (Column 36, line 49 through Column 37, line 2 recite IED's re-routing power based on a self-healing algorithm).

As to Claim 33, Blackett et al. anticipate the appliance of claim 18 wherein said node element implements a proxy mechanism whereby said appliance may be controlled by entities external to said appliance that are coupled to said electric power network (Column 27, lines 41-52 recite the transport box in one embodiment that works with the IED to communicate information with the network external devices).

As to Claim 34, Blackett et al. anticipate the appliance of claim 18 wherein said node element implements data encryption to control access to information via said global port (Column 4, lines 29-32 and Claims 5, 40 and 59 recite the use of encryption for security purposes).

As to Claim 35, Blackett et al. anticipate a method for facilitating interactions among a plurality of devices having at least one of power and analysis monitoring, control and communications capabilities and coupled to one another over a utility power network, the method comprising:

providing each of the devices with an inward port for establishing at least one of a power and analysis monitoring, control and communications link with at least one second device of the plurality of devices which is located downstream in the network (Column 5, line 62 through Column 6, line 23 recite the IED's power monitoring, analysis and control. Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to other nodes, hence each port has access to the other port's memory contents);

providing each of the devices with a global port for establishing at least one of a power and analysis monitoring, control and communications link with at least one third device of the plurality of devices which is located upstream in or at a same network layer portion of the network (Column 5, line 62 through Column 6, line 23 recite the IED's power monitoring, analysis and control. Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to other nodes, hence each port has access to the other port's memory contents); and

providing each of the devices with at least one globally available local interface, wherein the globally available local interface extracts interaction data from the links

established at the global port or the inward port and processes the interaction data to identify source and destination devices corresponding to the established links and to identify at least one of distributed computing instructions, data aggregation instructions, device control instructions and aggregated data clusters, wherein the globally available local interface universally formats at least a portion of the interaction data associated with the link established at the inward port for transmission to at least one of the second device and the third device (Column 5, line 62 through Column 6, line 23 recite data aggregation via monitoring and device control. Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to, and receive information from, other nodes, hence each port has access to the other port's memory contents)

As to Claim 36 Blackett et al. anticipate the method of claim 1, wherein the device control instructions include information concerning potential or actual faults in the network and at least one alternative for transferring transmission of at least one of power and communications signal energy associated with a first segment of the network to a second segment of the network, thereby self healing the network (Column 36, line 49 through Column 37, line 2 recite IED's re-routing power based on a self-healing algorithm).

As to Claim 37, Blackett et al. anticipate the method of claim 1 further comprising:

aggregating data received from the second device in accordance with the aggregating data instructions (Column 5, lines 36-41 recite IED's exchanging monitoring, protection and control information);

formatting the aggregated data into a universal format (Column 6, lines 38-54 recite the TCP/IP universal formatting); and

transmitting the universally formatted aggregated data from the global port to the third device (Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to, and receive information from, other nodes, hence each port has access to the other port's memory contents).

As to Claim 38, Blackett et al. anticipate the method of claim 1 further comprising:

processing service data received at the inward port from the second device or first level processed data received at the global port from the third device in accordance with the distributed computing instructions (Column 5, lines 36-41 and Column 5, line 62 through Column 6, line 23 recite IED's processing data from the IED's device and with interaction/commands from external network devices).

As to Claim 39, Blackett et al. anticipate the method of claim 1 further comprising:

aggregating universally formatted data received from the third device in accordance with the aggregating data instructions (Column 5, lines 36-41 recite IED's exchanging monitoring, protection and control information); and

transmitting the aggregated universally formatted data to at least one of the second device and the third device (Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to, and receive information from, other nodes, hence each port has access to the other port's memory contents).

As to Claim 40, Blackett et al. anticipate the method of claim 1 further comprising:

processing interaction data received from the second device or the third device and routing the interaction data to the destination indicated in accordance with real time data transmission criteria included in the interaction data (Fig. 7 recites IED 711 processing data from IED 712 or IED 714 and sending to Power utility 700).

As to Claim 41, Blackett et al. anticipate the method of claim 1, wherein at least one of the global port and inner port is adapted to support at least one of a power and analysis monitoring, control and communications link and different protocols and different media (Column 5, line 62 through Column 6, line 23 recite power analysis monitoring, control and communication).

As to Claim 42, Blackett et al. anticipate a node element apparatus for facilitating interactions among a plurality of devices having at least one of power and analysis monitoring, control and communications capabilities and coupled to one another over a ultility power network, the apparatus comprising:

an inward port for establishing at least one of a power and analysis monitoring, control and communications link with at least a second device of the plurality of devices which is located downstream in the network (Column 5, line 62 through Column 6, line 23 recite power analysis monitoring and control. Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to other nodes, hence each port has access to the other port's memory contents)

a global port for establishing at least one of a power and analysis monitoring, control and communications link with at least a third device of the plurality of devices which is contained in an upstream portion or a same network layer portion of the network (Column 5, line 62 through Column 6, line 23 recite power analysis monitoring and control. Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to other nodes, hence each port has access to the other port's memory contents); and

at least one globally available local interface coupled to the global port and the inward port, wherein the globally available local interface extracts interaction data from the links established at the global port or the inward port and processes the interaction

data to identify source and destination devices corresponding to the established links and to identify at least one of distributed computing instructions, data aggregation instructions, device control instructions and aggregated data clusters, wherein the globally available local interface universally formats at least a portion of the interaction data associated with the link established at the inward port for transmission to at least one of the second device and the third device (Column 5, line 62 through Column 6, line 23 recites data aggregation via monitoring, power control. Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to other nodes, hence each port has access to the other port's memory contents).

As to Claim 43, Blackett et al. anticipate the apparatus of claim 8 further comprising:

a local structured aggregate module for aggregating data received at the inward port in accordance with the aggregating data instructions, formatting the aggregated data into a universal format, and transmitting the universally formatted aggregated data from the global port to the third device (Fig. 17 and Column 5, line 62 through Column 6, line 54 recite power monitoring of an IED's device, formatting into TCP/IP and transmitting to other IED's on the network).

As to Claim 44, Blackett et al. anticipate the apparatus of claim 8 further comprising:

a global structured aggregate module for aggregating universally formatted data received from a plurality of the third devices and transmitting the globally aggregated universally formatted data to at least one of the third devices (Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to other nodes, hence each port has access to the other port's memory contents).

As to Claim 45, Blackett et al. anticipate the apparatus of claim 8 further comprising:

a global structured aggregate module for processing service data received at the inward port from the second device or first level processed data received at the global port from the third device in accordance with the distributed computing instructions (Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to other nodes, hence each port has access to the other port's memory contents).

As to Claim 46, Blackett et al. anticipate the apparatus of claim 8, wherein the device control instructions include information concerning potential or actual faults in the network and at least one alternative for transferring transmission of at least one of power and communications signal energy associated with a first segment of the network to a second segment of the network, thereby self healing the network (Column 36, line

49 through Column 37, line 2 recite IED's re-routing power based on a self-healing algorithm).

As to Claim 47, Blackett et al. anticipate the apparatus of claim 8, wherein the globally available local interface processes interaction action received from the second device or the third device and routes the interaction data to a destination device in the network in accordance with real time data transmission criteria included in the interaction data (Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to other nodes, hence each port has access to the other port's memory contents) and (2)

As to Claim 48, Blackett et al. anticipate the apparatus of claim 8, wherein at least one of the global port and the inner port is adapted to support at least one of a power and analysis monitoring, control and communications link having different data signal protocols and on different media. (Column 5, line 62 through Column 6, line 23 recite power analysis, monitoring and control. Fig. 17 and Column 6, lines 38-54 recite the IED service the purpose of multi-node communication using its ports, which contain memory, to pass along information to other nodes, hence each port has access to the other port's memory contents).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These include:

- US 2006/0212194 A1 - Vehicle Communications Using the Internet.
- US 2005/0144437 A1 - System and method for assigning an identity to an intelligent electronic device.
- US 6,751,562 B1 - Communications architecture for intelligent electronic devices.
- US 6,961,641 B1 - Intra-device communications architecture for managing electrical power distribution and consumption.
- US 6,650,876 B1 - Methods and arrangement relating to a radio communication network.
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard G. Keehn whose telephone number is 571-270-

5007. The examiner can normally be reached on Monday through Thursday, 8:30am - 7:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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